

CLAIMS:

5 1. A hair-removing device provided with a laser source, an adjustable laser beam manipulator for positioning a laser beam supplied by the laser source during operation in a target position on a skin to be treated, and an image sensor for detecting an image of at least a portion of the skin, characterized in that the laser source is controllable by means of an electrical control unit, which control unit during operation determines the target position of the laser beam as a function of a position and/or orientation on the skin of a hair to be removed as determined from the image by the control unit, and which control unit activates the laser source the moment the laser beam manipulator is in a position which corresponds to the target position of the laser beam.

5 2. A hair-removing device as claimed in claim 1, characterized in that the control unit determines the target position of the laser beam in a partial region of the image having dimensions which are determined by a previously determined average distance between hairs present on the skin and a previously determined length of the hairs.

3. A hair-removing device as claimed in claim 2, characterized in that the dimensions of the partial region of the image are adjustable.

20 4. A hair-removing device as claimed in claim 2, characterized in that the laser beam manipulator is adjustable by means of the control unit into a sequence of consecutive positions which correspond to a regular sequence of virtual positions of the laser beam on said portion of the skin, a reference position in the partial region of the image corresponding to the instantaneous virtual position of the laser beam, and the control unit activating the laser source when the reference position corresponds to the target position of the laser beam.

25 5. A hair-removing device as claimed in claim 2, characterized in that the control unit determines the target position of the laser beam in a regular sequence of consecutive partial regions of the image, the laser beam manipulator being adjustable by means of the

control unit in each of said partial regions into a position which corresponds to the target position of the laser beam in the relevant partial region.

6. A hair-removing device as claimed in claim 1, characterized in that the control unit determines from the position and orientation on the skin of the hair to be removed, as determined from the image, a region on the skin below which a root of the hair will be present with a predetermined degree of probability, the control unit determining at least one target position on the skin in said region.

7. A hair-removing device as claimed in claims 5 and 6, characterized in that the laser beam manipulator is adjustable by means of the control unit into a sequence of consecutive positions which correspond to a displacement of the laser beam over a rectilinear path on the skin with a predetermined velocity, said rectilinear path lying on a virtual straight line which coincides substantially with a perpendicular projection of the hair to be removed on the skin, the control unit activating the laser source at the start of said displacement.

8. A hair-removing device as claimed in claims 5 and 6, characterized in that the laser beam manipulator is adjustable by means of the control unit into a number of consecutive fixed positions corresponding to a number of fixed target positions of the laser beam on a rectilinear path on the skin, which rectilinear path lies on a virtual straight line which coincides substantially with a perpendicular projection of the hair to be removed on the skin, the control unit activating the laser source in each of said fixed positions of the laser beam manipulator during a predetermined time.

9. A hair-removing device as claimed in claim 1, characterized in that the control unit determines an exit position on the hair, where the hair issues from the skin, from the position and orientation on the skin of the hair to be removed as determined from the image, the control unit equalizing the target position of the laser beam with a position on the hair adjacent said exit position.

10. A hair-removing device as claimed in claim 1, characterized in that the hair-removing device comprises a separate illumination member for illuminating at least the portion of the skin which is to be detected by the image sensor.

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14. A hair-removing device as claimed in claim 12, characterized in that, for determining the actual position of the laser beam on the skin, the control unit activates the laser source at a comparatively low energy density.